

Your Eyes and UV Radiation

The sun supports all life on our planet; however, its life-giving rays also pose dangers.

The principal danger is in the form of ultraviolet (UV) radiation. UV radiation is a component of solar energy, but it can also be given off by artificial sources like welding machines, tanning beds and lasers.

UV radiation is divided into UV-A, UV-B and UV-C. UV-C is absorbed by the ozone layer and does not present any threat (man made sources of UV-C, like electric welding arcs, are very harmful to the eyes, if you do not use the proper protection). That's not true of UV-A and UV-B. Scientific evidence now shows that exposure to both UV-A and UV-B can have damaging long and short term effects on your eyes and vision.

If you are exposed, unprotected, to excessive amounts of UV radiation over a short period of time, you are likely to experience a condition called photokeratitis. Like a "sunburn of the eye" it may be painful and you may have symptoms including red eyes, a foreign body sensation or gritty feeling in the eyes, extreme sensitivity to light and excessive tearing. Fortunately, this is usually temporary and rarely causes permanent damage to the eyes.

Long term exposure to UV radiation can be more serious. Scientific research has shown that exposure to even small amounts of UV radiation over a period of many years may increase your chance of developing a clouding of the lens of the eye called a cataract and can cause damage to the retina, the nerve-rich lining of your eye that is used for seeing. Damage to the lens or the retina is usually not reversible.

The effects of UV radiation are cumulative. The longer your eyes are exposed to UV radiation, the greater the risk of developing conditions such as cataracts in later life. Therefore, you should wear quality sunglasses that offer good protection and a hat or cap with a wide brim whenever you are working outdoors, participating in outdoor sports, taking a walk, running errands or doing anything in the sun.

To provide protection for your eyes, your sunglasses should:

- block out 99 to 100 percent of both UV-A and UV-B radiation;
- screen out 75 to 90 percent of visible light;
- be perfectly matched in color and free of distortion and imperfection; and
- have lenses that are gray, green or brown.

If you spend a lot of time outdoors in bright sunlight, wrap around frames provide additional protection from the harmful UV radiation.

People who wear or are interested in wearing contact lenses can now enjoy an added measure of protection. Contact lenses with a UV-blocking feature are now available. These contact lenses should not be worn in place of your sunglasses, but they do provide excellent added protection by blocking much of the UV radiation that can seep in from the top, bottom and sides of your sunglasses. With the small, round lenses found in many trendy frames, wearing UV-blocking contact lenses is an added measure of protection against potentially harmful UV radiation.

Contact lenses with UV-blocking also provide UV protection against indoor UV radiation emitted by sources such as high wattage halogen and fluorescent lighting. By wearing UV-blocking contact lenses, your eyes will also be protected indoors when you are less likely to be wearing sunglasses.

Don't forget protection for children and teenagers. They typically spend more time in the sun than adults.

UV RADIATION CHECKLIST

If one or more of the following factors fits you, you could be in a higher risk category for damage to your eyes from UV radiation:

- Do you spend a great deal of time outdoors?
- Do you spend time skiing, mountain climbing or at the beach?
- Do you use a sunlamp or tanning parlor?
- Do you live at high altitude?
- Are you a welder, medical technologist or do you work in the graphic arts or in the manufacture of electronic circuit boards?
- Do you take prescription or over the counter drugs that can increase your sensitivity to UV radiation (check with your optometrist, pharmacist or physician)?
- Have you had cataract surgery in one or both eyes?

Be sure to see your optometrist regularly for a thorough eye examination. It is a good way to monitor your eye health, maintain good vision and keep up to date with new advances in UV protection.